



PATENT  
ATTORNEY DOCKET NO.: 046124-5276

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: )  
Hideo MURAYAMA *et al.* )  
Application No.: 10/786,366 ) Group Art Unit: To Be Assigned  
Filed: February 26, 2004 ) Examiner: To Be Assigned  
For: RADIATION THREE-DIMENSIONAL POSITION) )  
DETECTOR )

Commissioner for Patents  
U.S. Patent and Trademark Office  
2011 South Clark Place  
Customer Window  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

Sir:

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. § 1.97(b)**

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicants bring to the attention of the Examiner the documents listed on the attached PTO Form-1449. To the best of the undersigned's knowledge, this Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits for the above-referenced application.

Applicants respectfully request that the Examiner consider the listed documents and evidence that consideration by making appropriate notations on the attached PTO Form-1449.

Relevance of the non-English documents can be ascertained from the English abstract, or from the enclosed corresponding English language document or from reference thereto in the instant specification.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If it should be determined that any of the listed documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such document.

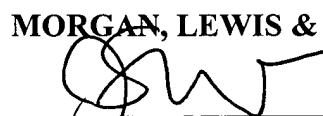
Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

**Except** for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310.

This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

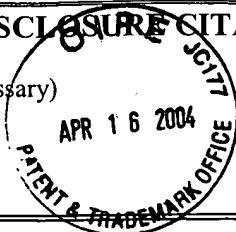
**MORGAN, LEWIS & BOCKIUS LLP**

  
John G. Smith  
Registration No. 33,818

Dated: April 16, 2004

**Customer No. 009629**  
**MORGAN, LEWIS & BOCKIUS LLP**  
1111 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004  
(202) 739-3000

<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary) PTO Form-1449			Attorney Docket No.: 046124-5276	Application No.: 10/786,366
			Applicant(s): Hideo MURAYAMA <i>et al.</i>	
			Filing Date: February 26, 2004	Group: Unassigned



### U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Sub Class	Filing Date
	4,945,241	July 31, 1990	Yamashita <i>et al.</i>	250	367	March 7, 1989
	6,087,663	July 11, 2000	Moisan <i>et al.</i>	250	367	Feb. 5, 1998

### FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Sub Class	Translation	
						Yes	No
	JP 2000-180551	June 30, 2000	Japan			X (Abstract Only)	
	JP 11-142523	May 28, 1999	Japan			X (Abstract Only)	
	JP 2000-056023	Feb. 25, 2000	Japan			X (Abstract Only)	
	JP 2003-021682	Jan. 24, 2003	Japan			X (Abstract Only)	
	JP 06-337289	Dec. 6, 1994	Japan			X (Abstract Only)	
	JP 11-142524	May 28, 1999	Japan			X (Abstract Only)	
	JP 01-229995 (corresponds to US Patent 4,945,241)	Sept. 13, 1989	Japan				X
	JP 63-047686	Feb. 29, 1988	Japan			X (Abstract Only)	

### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Inadama <i>et al.</i> , "A Depth of Interaction Detector for PET With GSO Crystals Doped With Different Amounts of Ce", <u>IEEE Transactions on Nuclear Science</u> , Vol. 49, No. 3, pp. 629-633, June 2002.
	Yamamoto <i>et al.</i> , "A GSO Depth of Interaction Detector for PET", <u>IEEE Transactions on Nuclear Science</u> , Vol. 45, No. 3, pp. 1078-1082, June 1998.
	Moisan <i>et al.</i> , "Segmented LSO Crystals for Depth-of-Interaction Encoding in PET", <u>IEEE Transactions on Nuclear Science</u> , Vol. 45, No. 6, pp. 3030-3035, December 1998.
	Miyaoka <i>et al.</i> , "Design of a Depth of Interaction (DOI) PET Detector Module", <u>IEEE Transactions on Nuclear Science</u> , Vol. 45, No. 3, pp. 1069-1073, June 1998.

Examiner	Date Considered
----------	-----------------

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication.